Lend an Ear:
Auricular Therapy Protocols for Pain Management

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KDW Health Management LLC

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Disclosures & Acknowledgement

- The views expressed in this presentation are those of the author
- Karen Williams, DNP, FNP-BC, AQH, FAANP has no financial relationships with commercial interests to disclose
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Objectives

- Provide an overview of history of acupuncture and review of types of acupuncture
- Discuss history and significance of Auricular Therapy for pain management
- Review Auricular protocols useful for pain
- Review pertinent research
- Provide examples of clinical use through case reviews

Acupuncture, Alternatives to Narcotics Youtube Video

- **CNN - Escape Fire Movie - Acupuncture, Alternatives To Narcotics – YouTube**

According to the CDC:
20% of adults have chronic pain
(https://blogs.cdc.gov/nchs/2020/11/04/7026/)

In the US, the total number of dispensed opioid prescriptions in 2022 was over 130 million.
Prescription opioid overdose in the US, caused the death of approximately 280,000 from 1999 to 2021.
https://www.cdc.gov/drugoverdose/deaths/index.html

ESCAPE FIRE

The Fight to Rescue American Healthcare

Auriculotherapy/Auricular Acupuncture Evolves with Chinese Acupuncture

- Meridian based medicine - Seeks to restore harmony and balance: ***Qi - life force energy -*** travels along 12 main pathways or meridians within the body

- ***Qi is profoundly disturbed by traumatic stress***

- Historically evolved in China over 2000 years ago

- Yellow Emperor's Inner Classic- earliest major medical source dating back to 206 BC- 220 AD

(Helms, 2007)

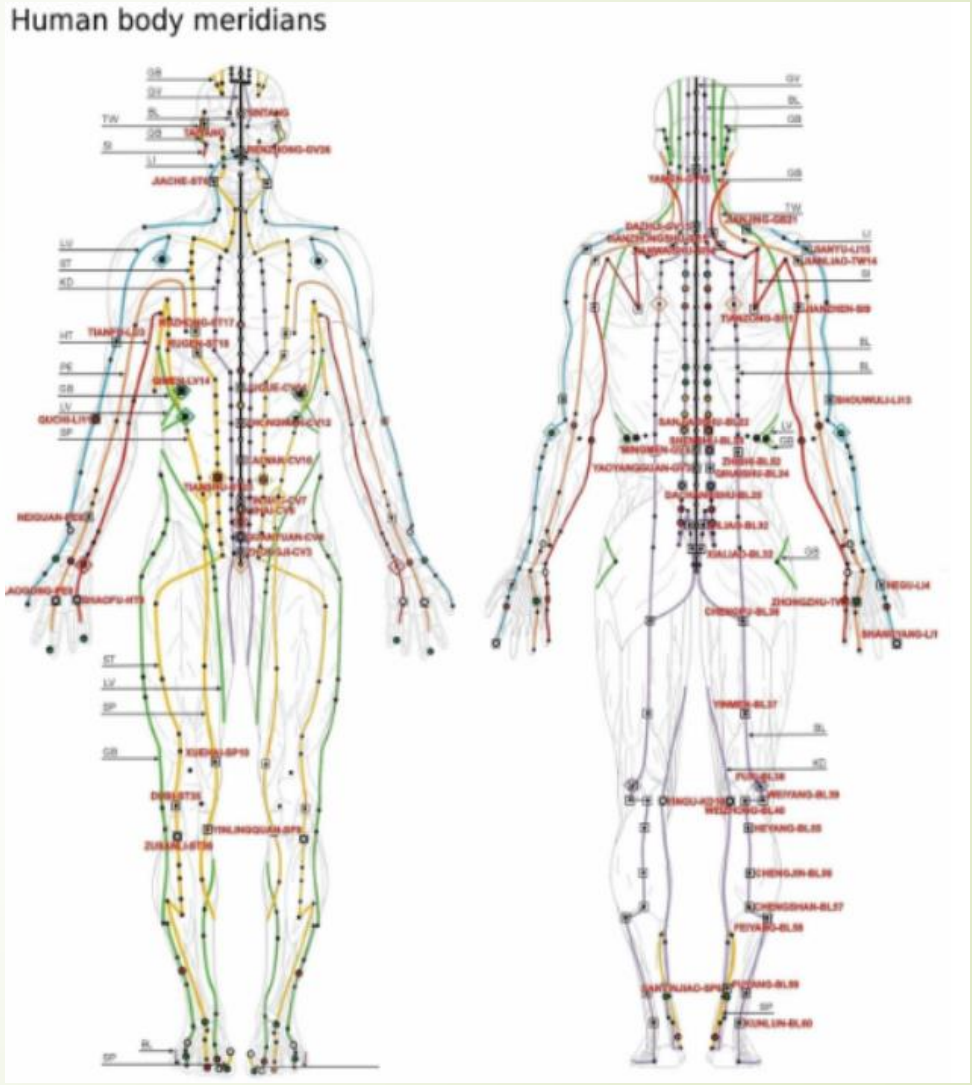
Interest in Acupuncture Begins in the United States

- On a trip to China with President Richard Nixon, NY Times reporter, James Reston, suffered appendicitis
- 1971- Front page of NY Times, James Reston reported on his emergency appendectomy in China - post op pain relieved by 3 needles (Reston, 1991)
- 3 months later a report in Journal of American Medical Association (Diamond, 1971)
- National Institutes of Health sponsored physicians to study Chinese health care and research acupuncture. Now we have National Institute of Complementary and Alternative Medicine (NICAM) (Chen, 1972)

Traditional Chinese Medicine (TCM)

- TCM most common form of acupuncture in the US – uses the 12 meridians plus several ‘curious’ meridians that transverse the body.
- **All 12 meridians at some point pass through the ear**
- Herbs, Qigong, Tai chi, cupping, and acupuncture or acupressure can be used/all to restore balance/harmony
- Diagnosis based on 8 principles:
  - Exterior/interior
  - Deficiency/excess
  - Cold/heat
  - Yin/Yang

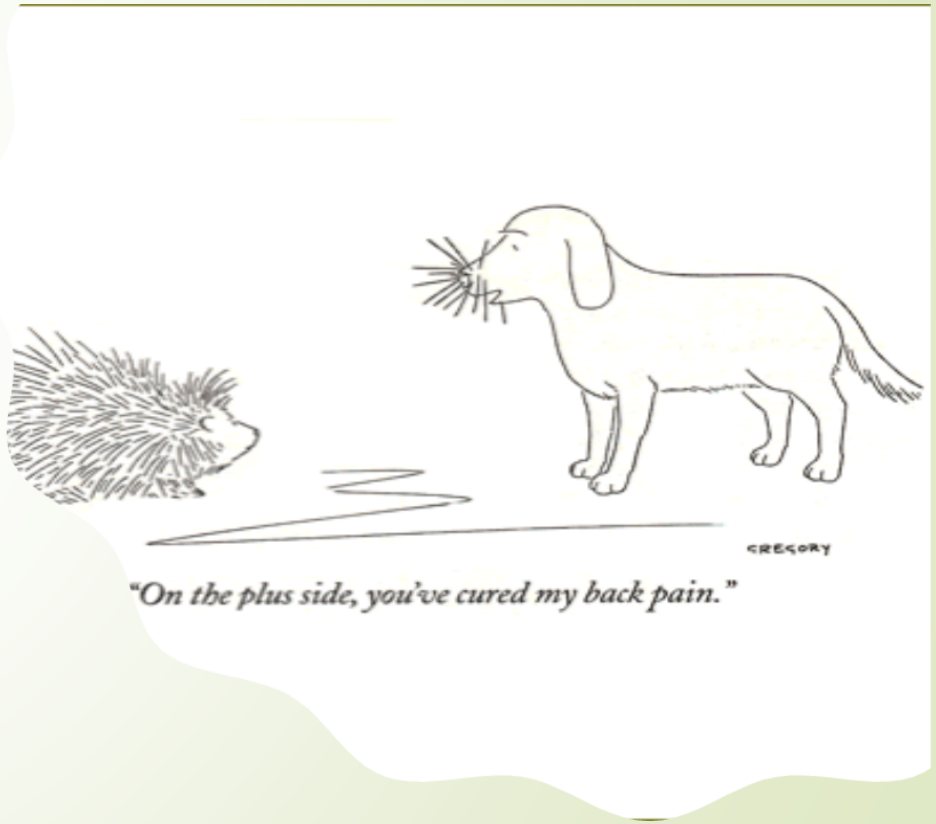
Meridians and Points



Different Types of Acupuncture

- Traditional Chinese Acupuncture (TCM)
- Medical Acupuncture
- Japanese Acupuncture
- Veterinary Acupuncture
- Korean Hand Acupuncture*
- Scalp Acupuncture*
- Auricular Therapy/Auriculotherapy*
  - Acupressure can be utilized in any type

* uses a microsystem



Pain treatment in the clinic setting

- Over 100 million Americans have chronic pain
- As nonpharmacologic pain management options gain interest, the provider is still left with a dilemma in treating pain in the clinic visit
- Analgesics and opioids are the two most utilized options
- Acupuncture has gained momentum in providing safe effective pain relief and has been included in guidelines from the American College of Physicians and the US Department of Health and Human Services
- **However, what if you are not an acupuncturist or a physician who is credentialed to offer acupuncture? What option do NP's and other providers have?**

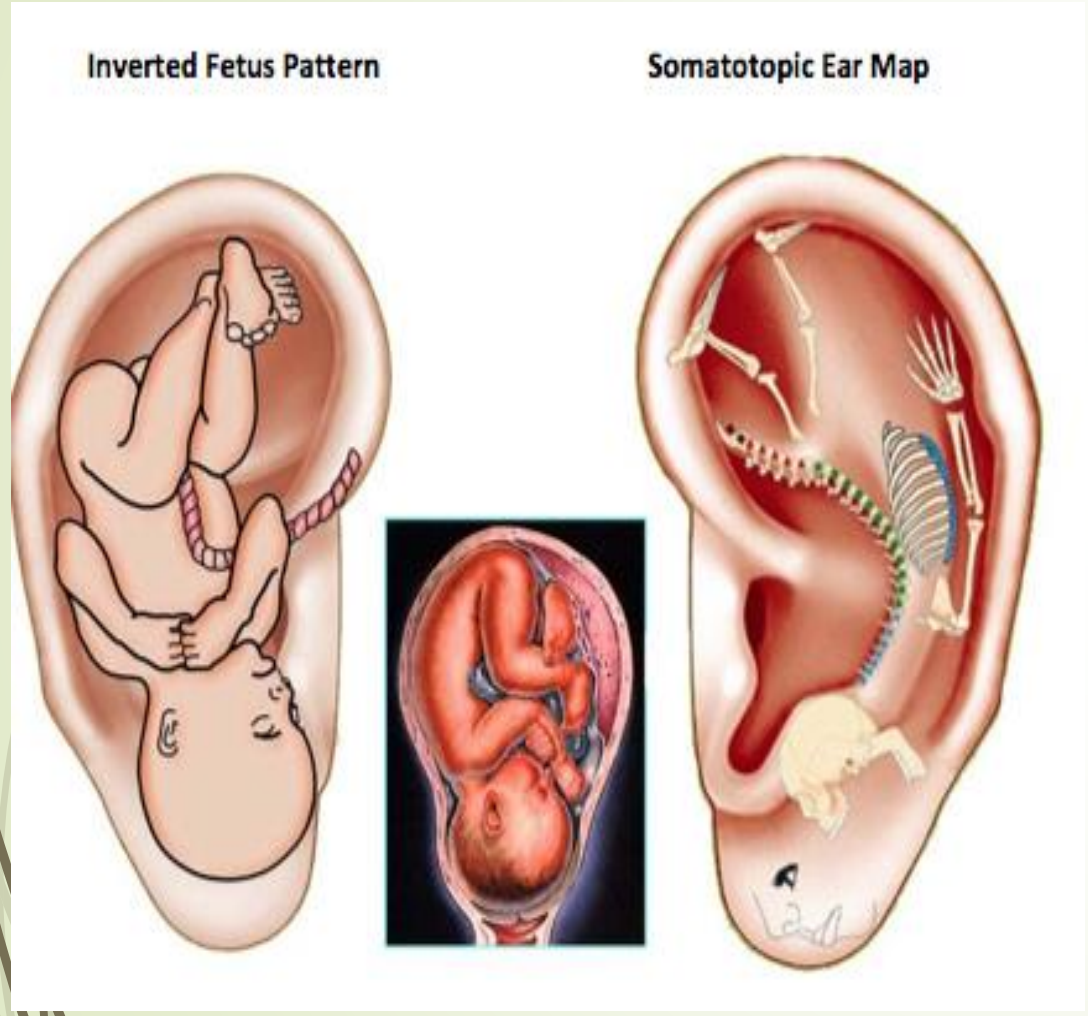
(Taylor et al., 2021; Zeliadt et al., 2020)

Auricular Therapy for Pain management

- **The Implementation and Effectiveness of Battlefield Auricular Acupuncture for Pain. Pain Medicine 2021: Commentary**
  - BFA introduced to the VA in 2013 to deliver pain relief in any setting & is widely utilized in the Veterans Health Care system (**over 4,600 clinicians**: this includes MD's, NP's, PA's, PT, OT, PharmD, & RN's).
  - It is effective across a wide range of Veterans to include those with preexisting chronic pain or physical or psychological comorbid conditions.
  - The immediate short term relief of BFA can provide the relief needed for the patient to start to engage in yoga, tai chi or other self management strategies

(Taylor et al., 2021; Zeliadt et al., 2020)

History of Auriculotherapy

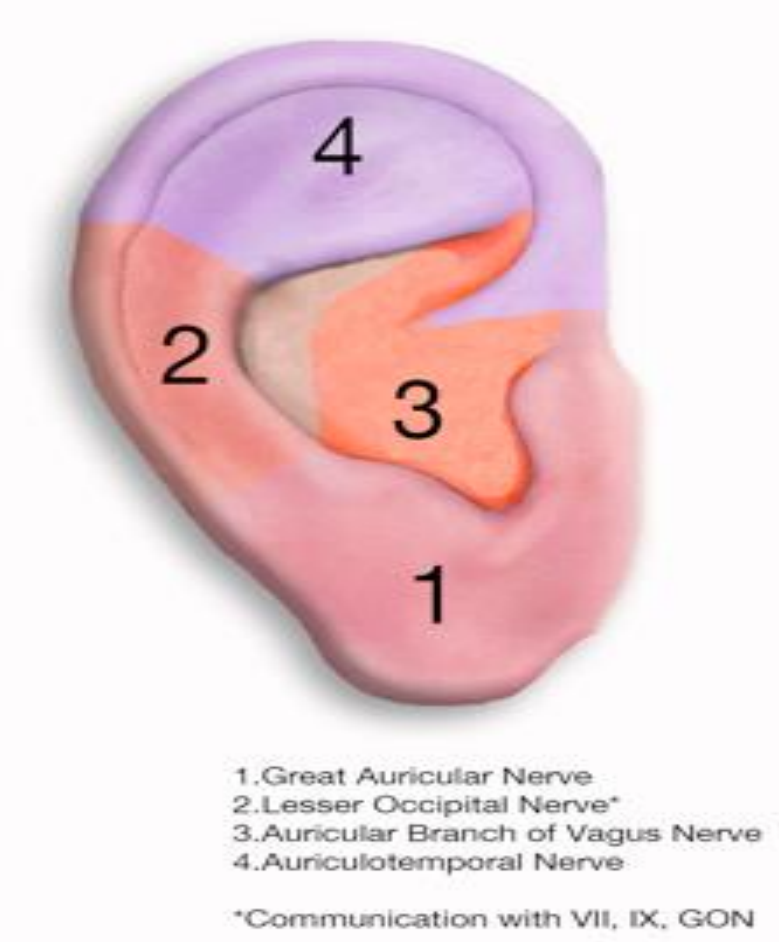


400 BC to 100 AD - Egypt, Greece and Rome – Hippocrates, Galen used earrings and other forms of ear stimulation
200 AD - Persians cauterized for sciatic pain
1500 -1700 Dutch East India Co. brought acu to Europe
1957 - Dr. Paul Nogier (French) noticed scarring on patients' ears, as a treatment of sciatica
1958 - Chinese learned of Dr. Nogier's charts and verified the accuracy of the points
1980 - Dr. Terry Oleson from UCLA verified the scientific accuracy of the auricular diagnosis
1990 - WHO standardized the terminology
2001 - Col. Richard Niemtzow, MD, PhD develops 'Battlefield Acupuncture" (BFA), now widely used in the DoD and VA

With permission from Terry Oleson, Ph.D

(Oleson. *Auriculotherapy Manual.* 2003: 2-19.; Oleson et al. *Pain.* 1980;8:217-229)

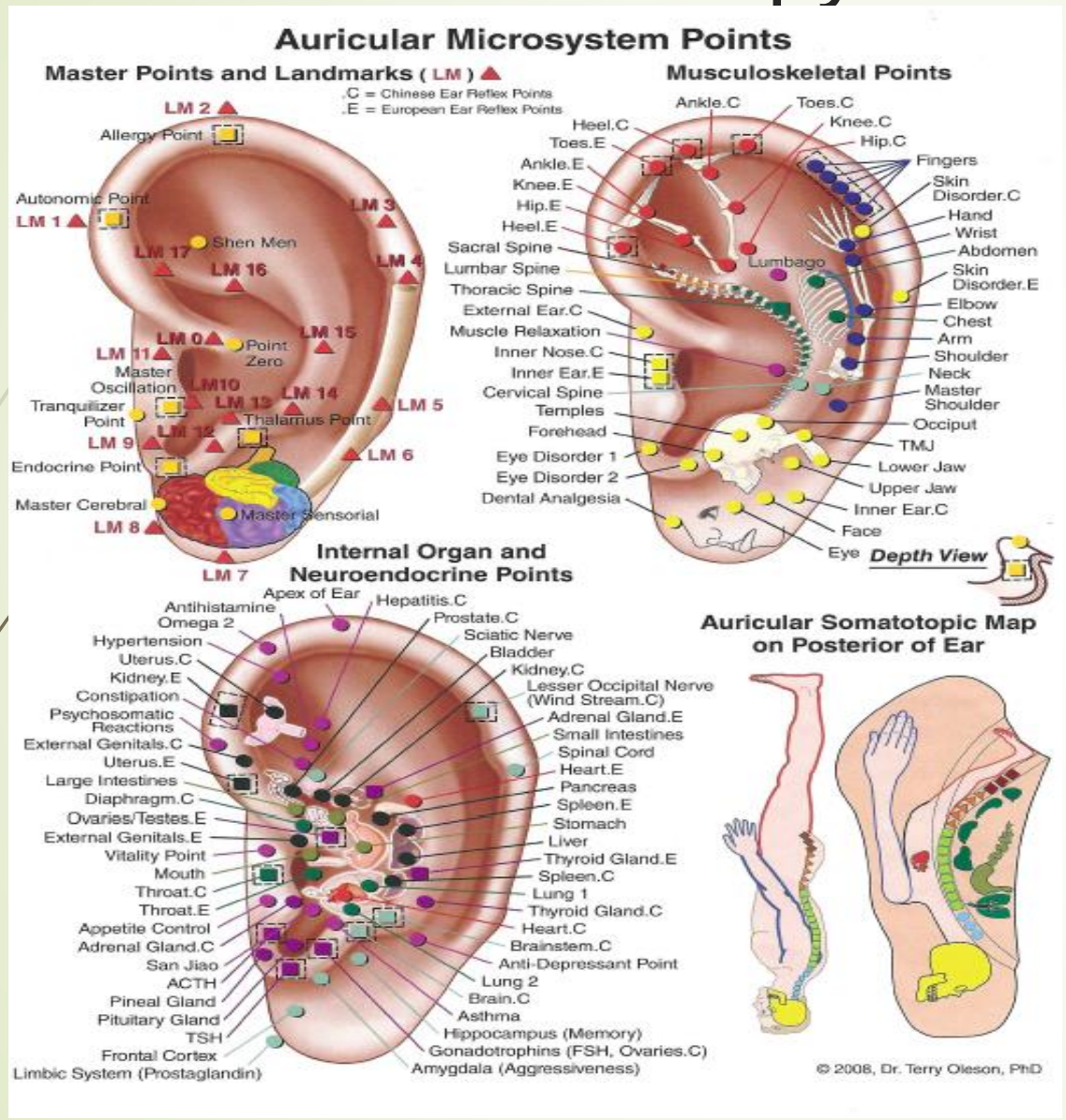
Auriculotherapy Theory



- Utilizes the ear as a homunculus/microcosm representation of human body with specific corresponding acupuncture points on ear
- Embryological development of the ear allows access to brain and subsequently the body organs
- 12 Meridians pass through ears
- Stimulation of nerve endings sends signals to the brain and then to the body
- By observing the ear one can identify specific issues/disease processes
- The treatment can be administered with needles, seeds or beads or electrical stimulation

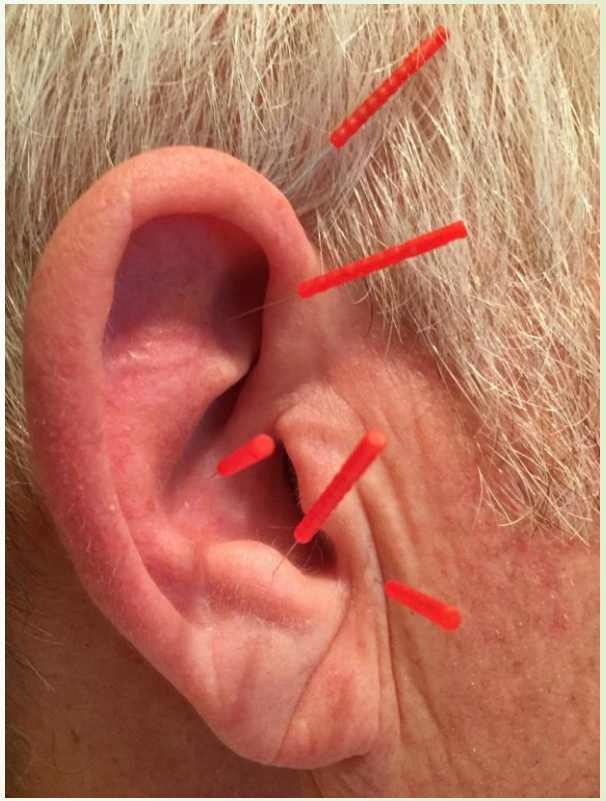
(Oleson, 2003)

Auriculotherapy/Auricular Acupuncture



With permission from Terry Oleson, Ph.D

BFA protocol



"The Ear is a powerful portal"

"Dr Mitchell Elkiss DO"

Auriculotherapy use

- Treatment for substance abuse (NADA protocol) and more recently for PTSD, TBI, and battlefield acupuncture (BFA)
- Wide range of disorders to include headache, chronic back pain, asthma, allergic rhinitis, dental pain, anxiety, insomnia
- Points can be needled, seeded, electrically stimulated
- Allows quick and easy access for treatment
- Treatments take as little as 20 minutes, provide relief for days to weeks
- Easy to learn

(Oleson, 2003)

Auricular Exam

- General health history, PE as needed
- Education and informed consent obtained
- Examine ears closely – dry patches, lesions, congestion and redness
- May palpate or use point finder to determine irregularities or painful spots
- May measure change in skin resistance with electrical probes

(Oleson T. 2003, Auriculotherapy Manual, pg. 172-173)

Precautions

Should not be performed on patients who are:

- Weak/exhausted
- Very hungry or have just eaten or drank alcohol
- * Pregnant- NADA protocol allows this, BFA does not
- *Under 7 years of age
- Anemia
- *Elderly – perform with care
- *Adverse to needles – use acupressure or seeds

* Relative contraindication

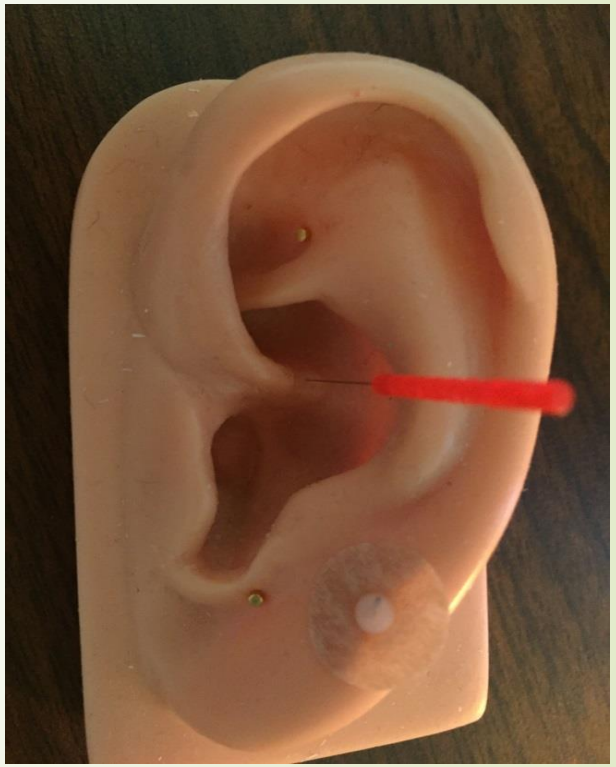
(Oleson T., 2003)

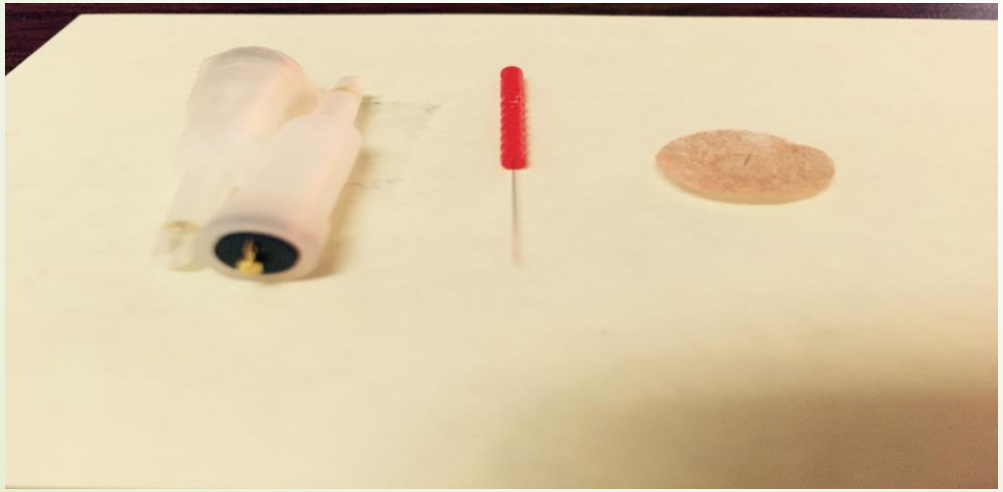
Side Effects

- Bruising, bleeding at the insertion site
- Infection at placement of the needle (very rare)
- ‘Needle Shock’ /AKA vasovagal reaction
  - Dizziness
  - Nausea
  - Sweating
  - Numbness
- Remove needles and allow patient to rest
- Occasionally symptoms increase but then resolve

(Oleson T.,2003)

How big are the needles?





Relative Value Unit (RVU) for acupuncture

Acupuncture without electric stimulation

- 97810- 0.6 RVU's - first 15 minutes
- 97811- 0.5 RVU's - additional 15 minutes

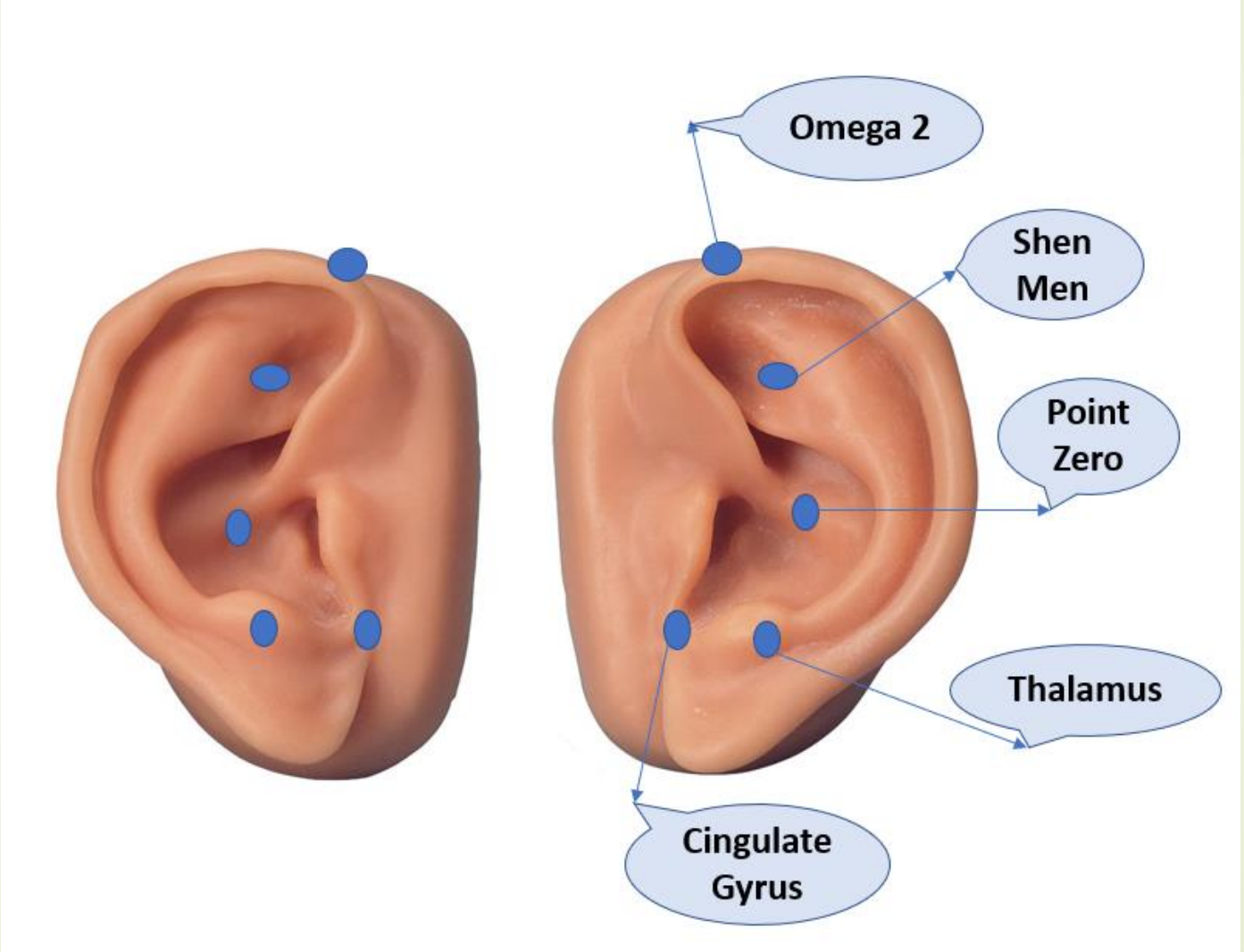
- **Acupuncture with electric stimulation**
  - 97813 – 0.65 RVU's - first 15 minutes
  - 97814 – 0.5 RVU's - additional 15 minutes

Easy Auricular Acupuncture Protocols

- **Battlefield Acupuncture (BFA)**
  - Cingulate gyrus, Thalamus, Omega 2, Point Zero, Shen Men
- **National Acupuncture Detoxification Association (NADA)**
  - Lung, Liver, Kidney, Shen Men, Autonomic Point
- **Auricular Trauma Protocol (ATP)**
  - Hypothalamus, Amygdala, Hippocampus, Master Cerebral/ (Prefrontal cortex), Point Zero, Shen Men, (can also add; Insula, Vagus)

(Helms et al. 2011; Koffman & Helms, 2013)

BFA Points



(KDW Health Management LLC)

Significance of Points/BFA

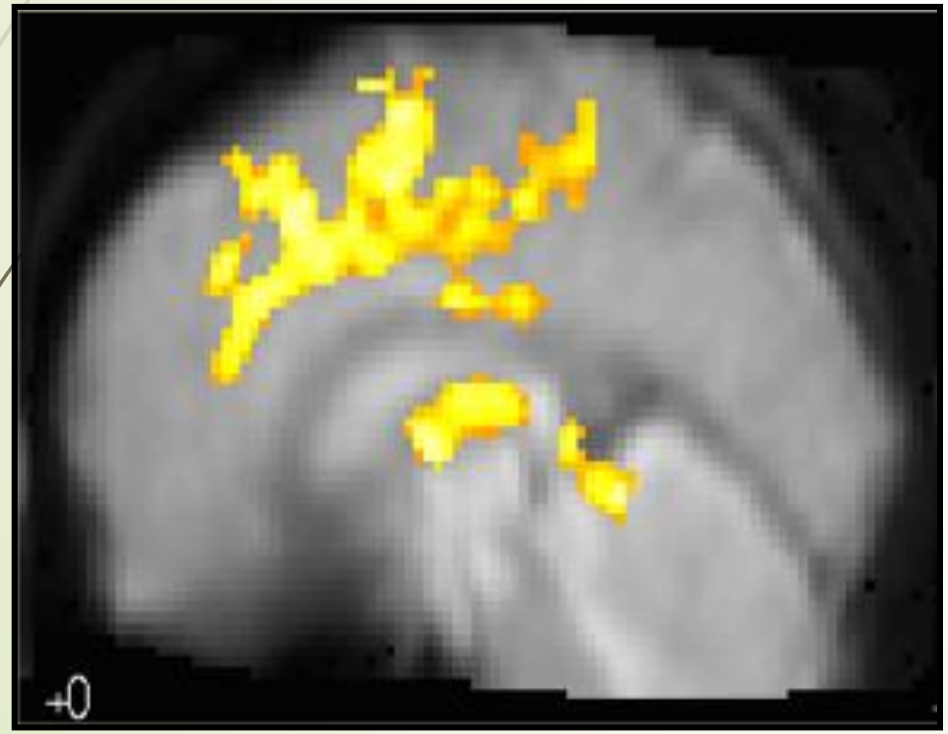
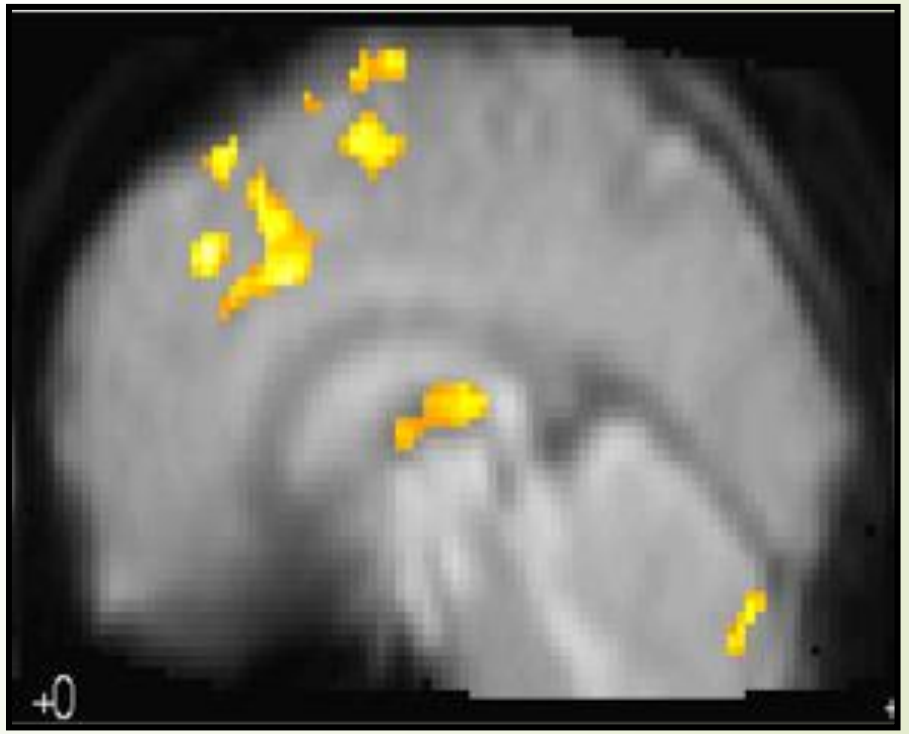
- **Cingulate gyrus-** memory and emotion with pain
- **Thalamus-** Communication of nervous system to cerebral cortex (Grand Central station), reducing shock, restoring tranquility
- **Omega 2** Psychosomatic d/o & pain in limbs
- **Point zero-** General body homeostasis/autonomic brain controlling visceral organs
- **Shen Men-** Parasympathetic switch, alleviates excessive sensitivity, calming, pain reduction, insomnia – supports other auricular reflex points

(Oleson T., 2003)

BFA

Science

Anterior Cingulate Cortex and Thalamic Nuclei

Pain stimulation	*Pain stimulation w/acupuncture*
	

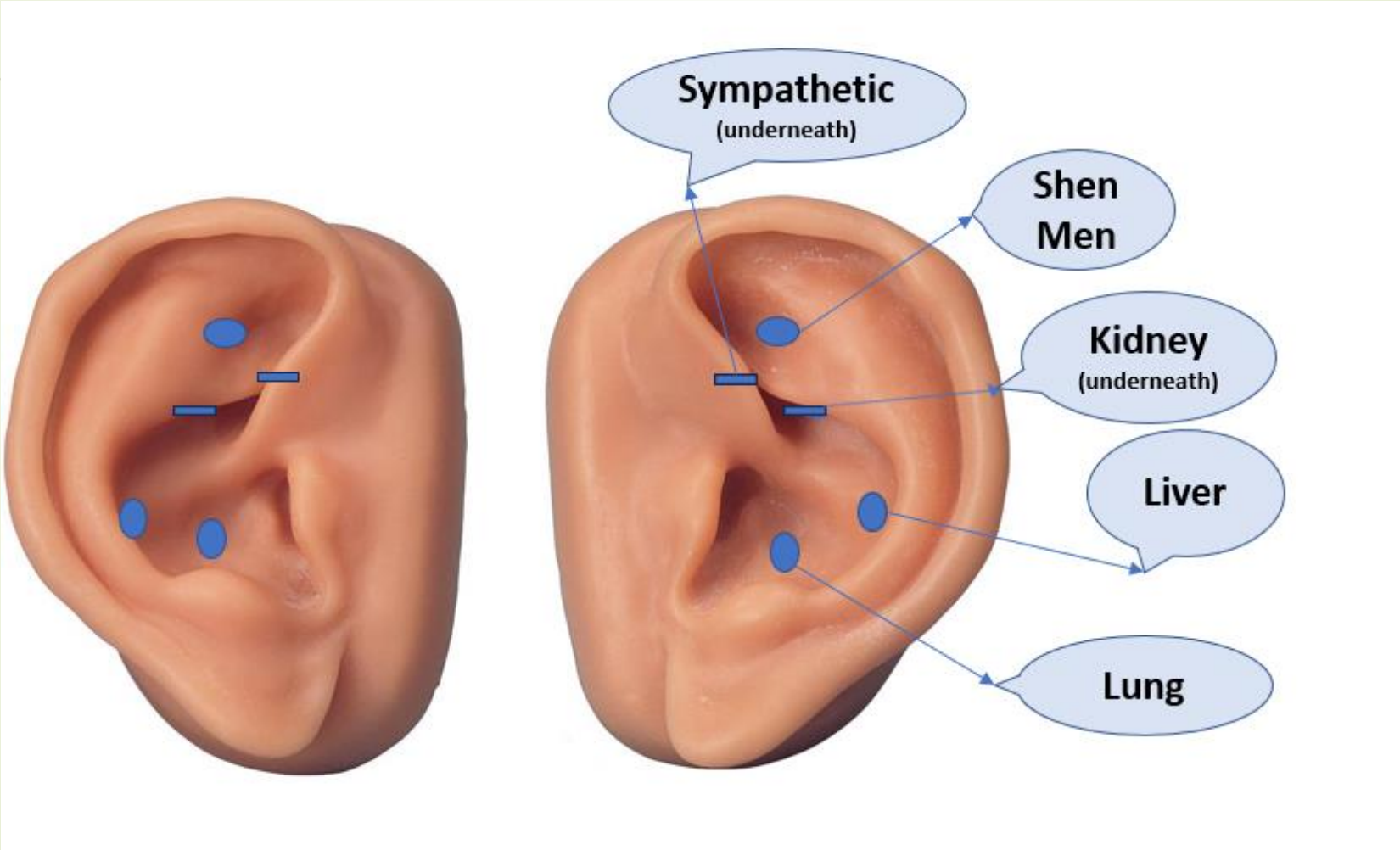
"With Permission from Dr Richard C. Niemtzow"

History of National Acupuncture Detoxification Association (NADA) and the NADA protocol

- Auricular acupuncture first evolved by Dr Nogier in the 1950's
- Dr. Wen and Dr. Cheung (Hong Kong) published their findings on using electric stim to the ear and body for opium addiction, 1973
- Dr. Michael Smith expanded ear points and utilized it at Lincoln Hospital (South Bronx) for drug and alcohol abuse, late 1970's
- NADA was founded by Dr. Smith and others in 1985
- ***Not a stand alone treatment- facilitates other treatments***

(National Acu Detox, 2011; Stuyt & Voyles, 2016; Stuyt et al., 2018)

NADA Points



(KDW Health Management LLC)

Significance of Points/NADA

- **Sympathetic/Autonomic point-** fight or flight- Balances, strong analgesic and relaxant, calms the spirit
- **Shen men-** spirit gate/calms the mind, opens the heart, reduces B/P, alleviates pain
- **Kidney-** relieves fear, allows one to hear positive
- **Liver-** anger/relieves muscle cramps aids in clear thinking, relieves depression, helps to find direction
- **Lung-** regulation of grief/sadness, provides inspiration

(National Acu Detox, pg 27, 2011)

- Western medicine perspective: Kidney, Liver, Lung points are in the region innervated by the parasympathetic Vagus nerve and are the organs of toxin elimination. Sympathetic point functionally opposes part of the Autonomic Nervous System

(Oleson, 2018)

NADA Consideration of use

- Substance abuse to include alcohol, nicotine, cocaine and opioids
- Recovery from trauma- helps with sleep, which may help with processing recent events
- Chronic pain reduction
- Safe in pregnancy
- Works well in groups
- Cost effective and safe

(National Acu Detox, 2011; Stuyt & Voyles 2016; Stuyt et al., 2018; NADA)

Additional uses of NADA

- NADA helpful for stress reduction, improving sleep and coping
  - 9/11 attacks- stress reduction clinic
  - Burmese (India and Thailand) refugee camps, 2001
  - Gulf Coast recovery – hurricanes Katrina and Rita, 2005
  - Kashmir earthquake and other disaster and relief efforts around the world
  - Richmond VA- prior to COVID/ administered 16 sessions for those starting the chronic pain program- helpful for pain reduction and the ability to focus on other pain reduction modalities

(National Acu Detox, 2011; Stuyt & Voyles 2016; Stuyt et al., 2018; NADA)

Auricular Trauma Protocol (ATP)

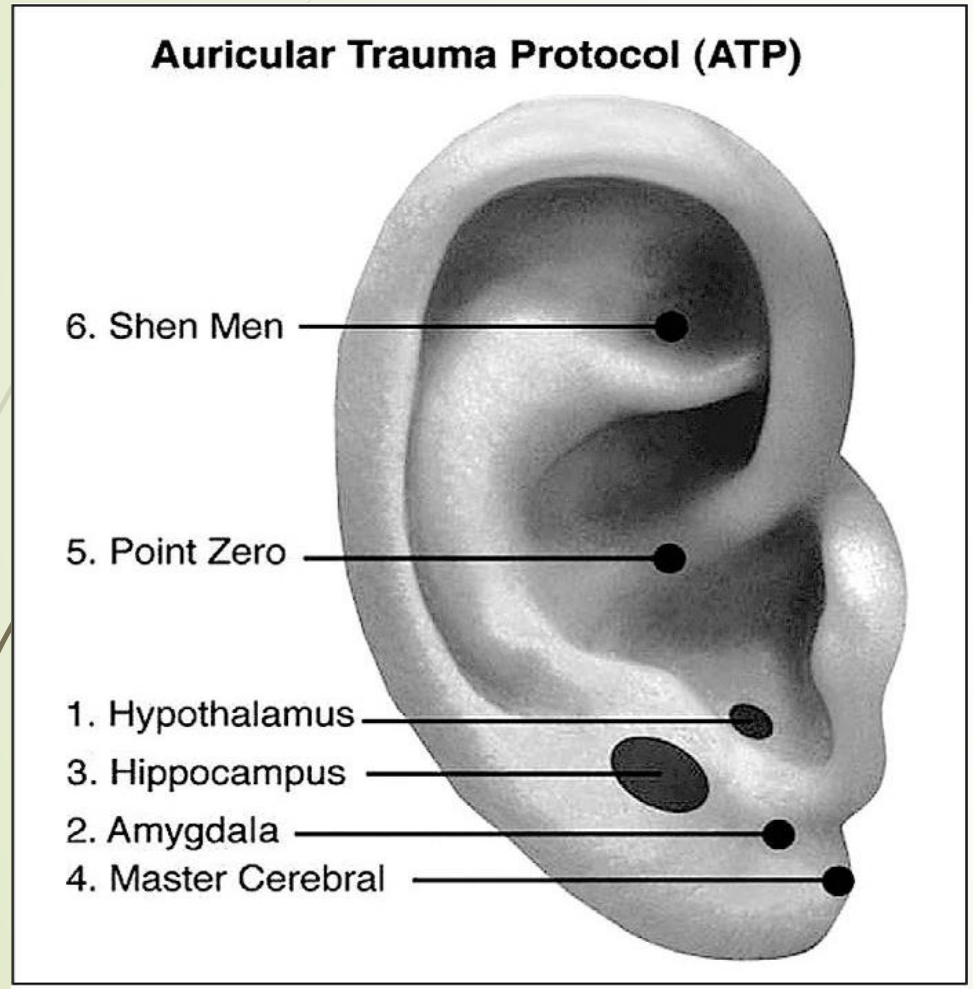


Fig. 1: Auricular Trauma Protocol points. Numbers indicate order in which the protocol is applied.

- **Targets the Limbic system/works on the psychological as well as the physical aspects of pain**
  - (developed in 2010 to help with trauma symptoms of active duty service members and veterans)
- **Hypothalamus** – Stimulates the parasympathetic functions of calming, centering, focusing, decision making and anxiety control
- **Amygdala** – modulates the expression of irritability, anger, fear and aggression
- **Hippocampus** – influences memory encoding and concentration/important for memory and concentration
- **Master Cerebral/Prefrontal cortex** – influential in psychoemotional and psychosomatic d/o, emotions accompanying chronic pain
- **Point Zero** - General body homeostasis/autonomic brain controlling visceral organs
- **Shen Men** - Parasympathetic switch, alleviates excessive sensitivity, calming, pain reduction, insomnia – supports other auricular reflex points

(Helms et al. 2011)

Auricular Innervation of the cranial nerves and Daith piercing for migraines

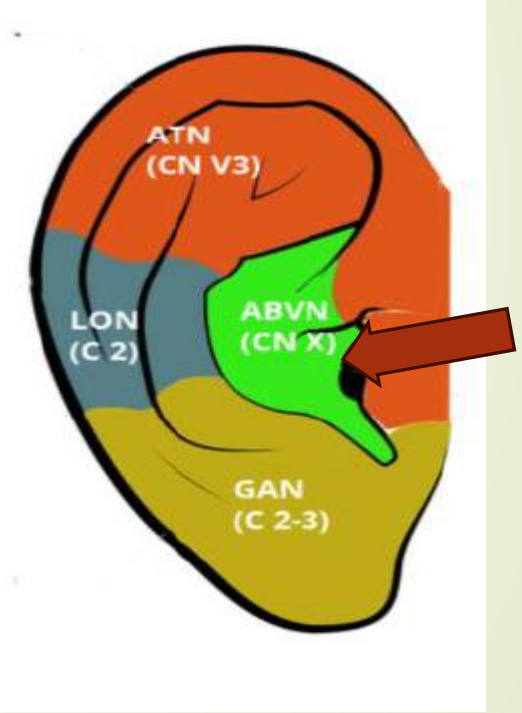
Daith Piercing

Permission from Dr Chris Blatchley; London Migraine Clinic

Not highly agreed upon as a safe alternative, a few studies show its *short term* effectiveness. AHS does not recommend. If wanted to be tried, consider temporary piercing and piercing be completed by an acupuncturist skilled in this procedure.

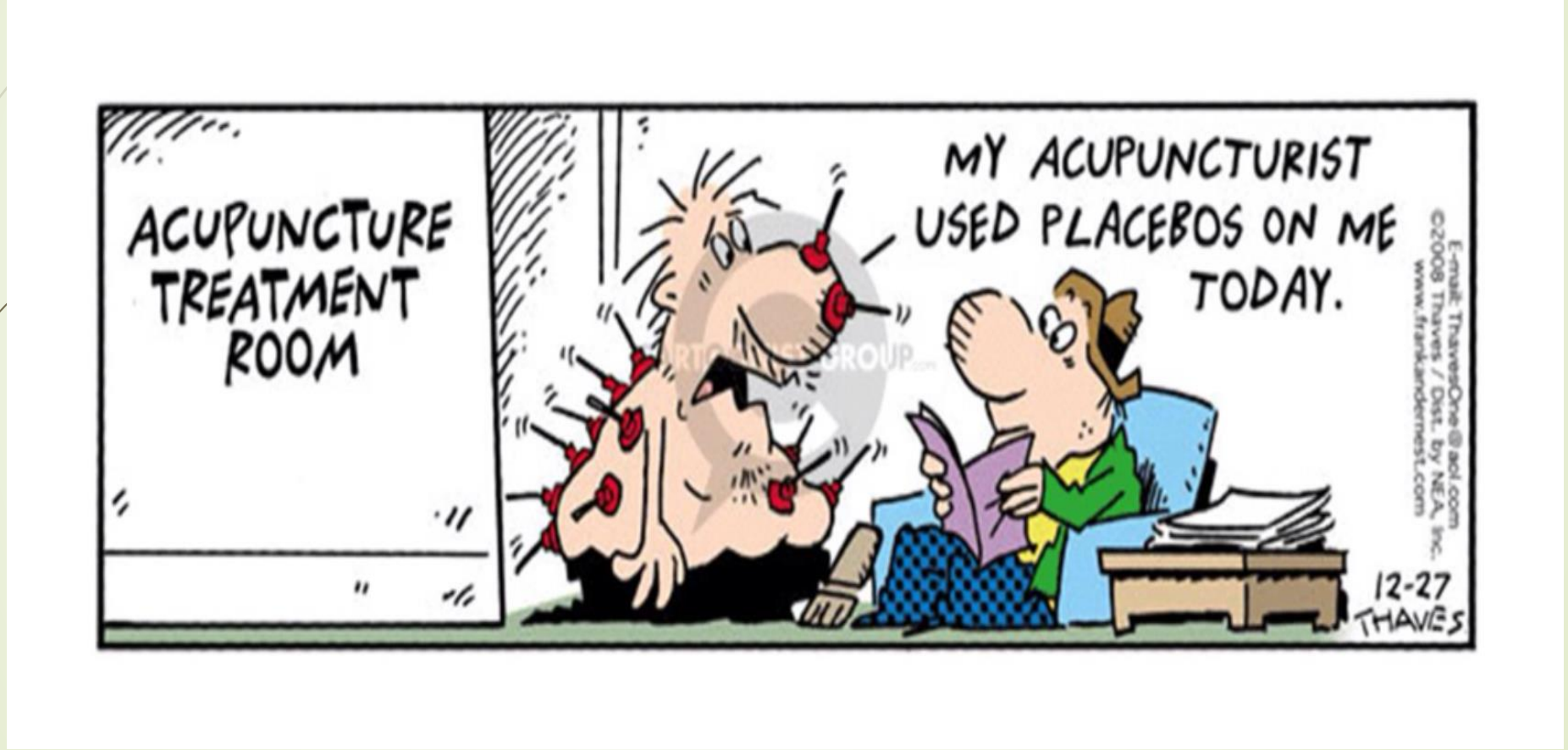
(Blatchley 2022; Pradhan et al 2024)

Auricular Cranial Nerve innervation



The external ear is the only place the Vagus nerve reaches the skin surface (Oleson 2018)

Research: Does It Work?



Does It Work? - Research -

- ***Efficacy of Auricular Therapy for Pain Management: A Systematic Review and Meta- Analysis (2014)*** Meta –analysis of 13 studies on Auricular Therapy (Acupressure, Acupuncture and Electro-acupuncture) showed a greater decrease in pain score than sham or control group

  (Yeh et al. 2014)

- ***Ear Acupuncture for Immediate Pain Relief - A Systematic Review and Meta- Analysis of Randomized Controlled Trials (2017)*** Meta-analysis of 10 studies that met inclusion, looking at pain intensity score and analgesic requirements. Overall ear acupuncture was superior to the analgesic, with minimal side effects. Recommended additional rigorous studies

  (Murakami, et al. 2017)

Does It Work? - Research -

- ***A Randomized Exploratory Study to evaluate Two Acupuncture Methods for the treatment of Headaches Associated with traumatic Brain Injury(2016).*** Post concussive headaches in active duty service members. Randomized exploratory study evaluated: usual care, TCM and Auricular Acupuncture. Acupuncture improved headache related quality of life more than usual care

  (Jonas, 2016)

- ***Auricular acupuncture for chronic pain and Insomnia: A randomized clinical trial (2018).*** 32 participants were randomized to either usual care vs usual care plus one treatment with BFA. The BFA group showed a statistically significant reduction in both chronic pain and insomnia vs the usual care group

  (Garner et al., 2018)

Does It Work? - Research -

- ***Auricular Therapy for Migraine (2024)*** A review of the literature on auricular therapy for acute or preventative treatment for migraine resulted in finding 3 studies specific to acute or prevention of migraine. (Review in Medline and Clinical Trials.gov from 2013 to 2023)

  Each of the three studies used different techniques with one blinded RCT, specific to acute only (used sterile needles), one blinded RCT specific to prevention only (used ASP), and one open RCT for both acute and prevention (used ASP). Despite the different points, each of the studies showed benefit from the auricular therapy. The authors did recommend further study.

  (Williams, 2024)

Does It Work? - Research -

- **Systematic Review and Meta Analysis Auricular Therapy for Cancer Pain**
  - 275 screened studies, 9 RCTs involving 783 patients with cancer pain were systematically reviewed. Variety of ear points utilized
  - Compared with drug therapy, auricular therapy plus drug therapy has significant advantages both in the effective rate for pain relief and adverse effects rate
  - Results revealed auricular acupuncture had superior pain-relieving effects as compared with sham auricular acupuncture
  - However, the analysis indicated no difference on the effective rate for pain relief between auricular therapy and drug therapy
  - Authors did add; RCT's had some methodological limitations. RCT's are still needed to confirm the benefits.

Yang et al. 2020

Does It Work? - Research -

- ***Patient Feedback on the Effectiveness of Auricular Acupuncture on Pain in Routine Clinical Care: The Experience of 11,406 Veterans. Med Care (2020)***

- Patient feedback on effectiveness of Battlefield Acupuncture (BFA) on pain in routine clinical care (2016 to 2028): 11,406 Veterans were treated with BFA at 57 VHA Medical Centers, 79% reported a reduction in pain with initial treatment and 77% in subsequent treatment: dropping by over 2 points from 6/10 to 3.8 or less

(Zeliadt et al., 2020)

Use of Auricular Therapy/BFA Leads to use of Traditional Acupuncture

- Veterans Health Administration: encourages Battlefield Acupuncture (BFA) as a non-pharmacological approach to pain. Does using BFA lead to increased use of traditional acupuncture?
- Cohort Study compared 24,037 BFA users to 40,358 non-BFA users
- Results: 9.5% of those who received BFA went on to use traditional acupuncture compared to .9% of non-BFA users/
- Adjusted Analysis showed BFA users had 10.9 x's greater odds of subsequent use of traditional acupuncture

(Thomas et al. 2020)

Considerations on Use of Auricular Therapy

- **These protocols are not meant to be stand alone**
  - May provide additional help in relieving pain
  - Reducing stress
  - Act as a “gateway”/increasing the patients motivation to take part in additional treatments, including self-management techniques
  - Auricular protocols may help reduce medication use, including opioids

(Stuyt 2016, Thomas et al. 2020, Taylor 2021, NADA training manual)

Acupuncture Systematic Reviews

- Systematic review 2018
  - Acupuncture is **effective for chronic pain treatment** and can be considered a reasonable option
  - Chronic pain to include musculoskeletal, headache, and osteoarthritis pain.
  - Treatment effects persist over time and placebo effect cannot fully explain the results.

(Vickers et al. 2018)

- Cochrane Systematic review 2016
  - Acupuncture should be **considered for migraine patients for prevention**, particularly if having adverse effects from medications
  - Acupuncture effect size was **statically significantly** larger in real acupuncture verses sham acupuncture **for chronic headaches**
  - Acupuncture should be **considered for treating episodic or chronic tension headaches**

(Linda et al. 2016, Linda et al. 2016)

Systematic Review: Acupuncture vs Standard Pharmacological Therapy for Migraine Prevention

- Acupuncture has fewer side effects and increasing evidence that it is just as effective as standard pharmacologic medication
- Difficulties in studying acupuncture still exist:
  - Understanding how acupuncture works
  - No standard treatment, migraine is complex, and acupuncture is individualized
  - Any intervention with skin penetration may still cause physiologic response therefore even *sham* acupuncture has some benefits
  - Future studies on acupuncture should compare to standard therapies, rather than *sham* acupuncture
- **Overall tolerability and safety are key; acupuncture is well tolerated with rare serious complications**

(Zang et al. 2019)

Acupuncture for Migraine Treatment: An Overview of Systematic Reviews

- A 2023 study was completed to evaluate the quality of SRs/MAs that investigated the use of acupuncture as a migraine treatment
- A total of 710 articles in six databases were identified, with 27 articles being included in the final review
- The study concluded that **acupuncture for migraine was a safe, convenient and effective therapy and should be promoted clinically**. However, the quality of the evidence for most of the studies needed improvement

(Guo et al. 2023)

Evidence Map of Acupuncture for Adult Health Conditions Update from 2013-2021

- Reviews that compared acupuncture to usual care reported that acupuncture was at least as safe or safer than usual care. More research is still needed.
- Five Evidence maps:
  - Musculoskeletal pain
  - All pain other than musculoskeletal pain
  - Mental health conditions
  - Women's health
  - Other conditions

(Shekelle et al. 2022)

Auricular Therapy Training Opportunities

- **Battlefield Acupuncture/Acupressure BFA/BAA-**
- Taught throughout the VA-
  - 4-hour course, online post quiz, work with your credentialing department
  - Open to Health Care Professionals in the VA (Physician, NP, PA, PharmD, RN)

- **BFA weekend course**: Richard Niemtzow, MD, PhD. https://www.n5ev.com/ (*Does not certify the provider in the technique)

Auricular Therapy Training Opportunities

- **NADA (National Acu-Detox Association)/ website with limited information, there will be a new site launched in the future**
  - 30-hour course
  - Complete 40 encounters under the supervision of a certified acu-detox specialist/can usually be done in a group settings
  - State specific, in some states this is open to MD, NP, PA, Social Work, Psychologist, RN, LVN
  - **VHA has developed a NADA course/launched in June 2024**

Auricular Therapy Training Opportunities

- **Auriculotherapy Training on line program: Terry Olson's course/Health Care Alternatives**

  https://www.auriculotherapy.com/online-course*Will give certification in auricular acupuncture or auriculotherapy; however certificate does not replace the need for licensure in a specific health care field, but it does acknowledge specialty of training in this particular health care modality

- **Helms Medical Institute/HMI**: In the process of developing a 8 hour auricular therapy course. 4 hours virtual didactic and 4 hours hands-on. Will give a certificate of completion. **https://hmieducation.com/contact-hmi/**

Medical Acupuncture Courses

- Multiple courses exist for Physicians (MD, DO) and some include NP's and PA's
  - - Usually, a 300-hour TCM or Medical acupuncture program
- Physicians can practice acupuncture under their scope of their medical license
- Some states allow NPs to practice full acupuncture after completion of a 300-hour course (ex. Washington and Arizona)
- In the DoD and VA, NP's and PA's can administer acupuncture depending on the institution and the state laws
- American Academy of Medical Acupuncture (AAMA)/ **https://medicalacupuncture.org** for sources of Med Acup courses

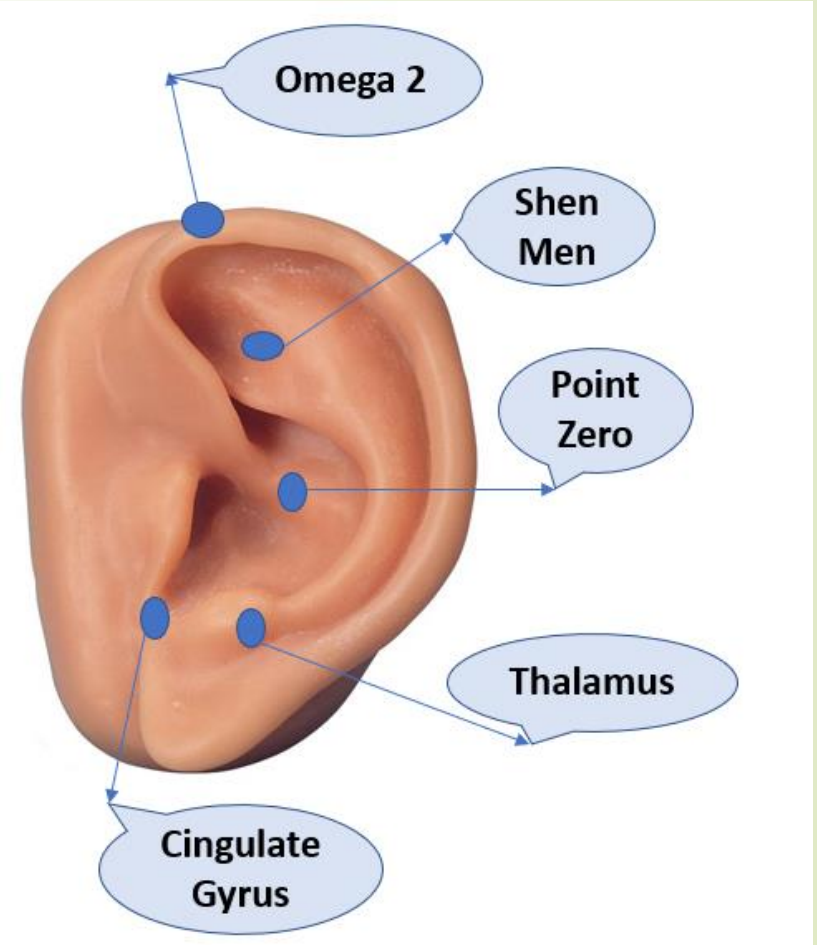
Case Reviews

Battlefield Acupuncture

Refractory Migraine

History and Treatment

- 28 year old active duty solider was being seen for a 2 weeks migraine that did not resolved even after ER treatment with IV medication
- BFA protocol placed in both ears and allowed the patient to rest in a chair for 20 minutes
- Migraine was completely resolved
- The solider left pain free without any adverse side effects



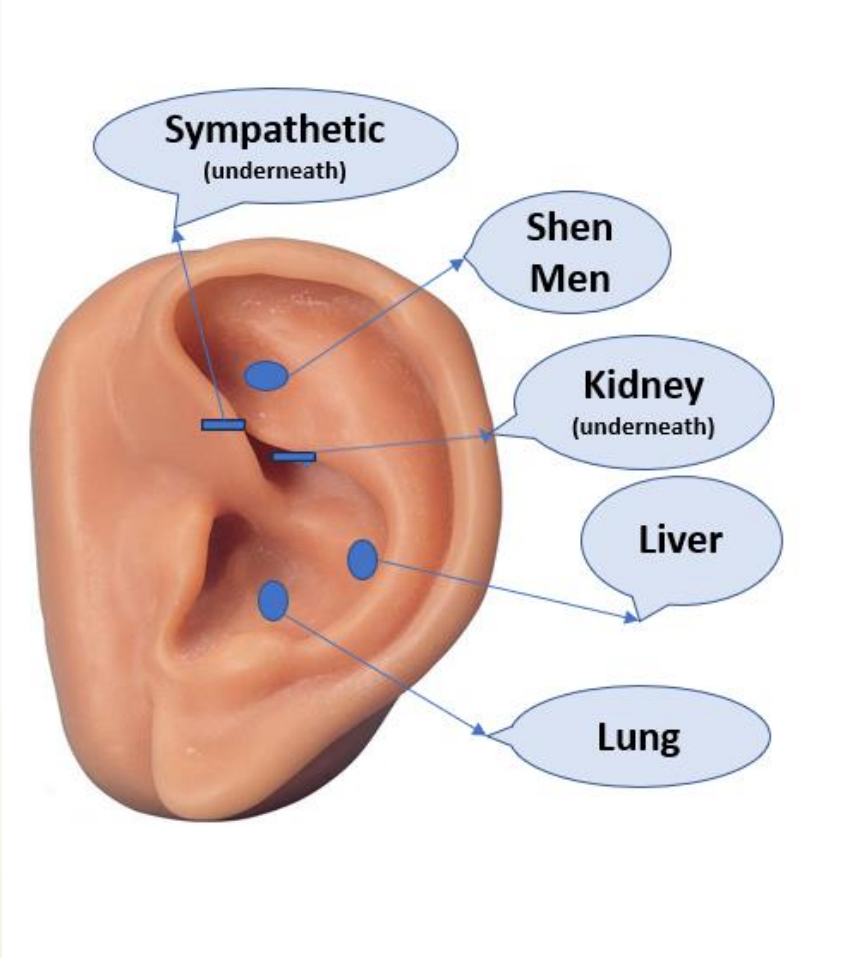
NADA

Acute opioid withdrawal

History and Treatment

- 40 year old female with chronic pain and migraines. Weaning off oral opioids and titrating up on an internal pain pump. Was being seen for Botox administration. Appeared uncomfortable with irritability and jitteriness. Complained of nausea and a diffuse headache; appeared uncomfortable

- Placed NADA protocol in each ear Symptoms resolved within 5 minutes, Botox administered to a very calm and headache free patient

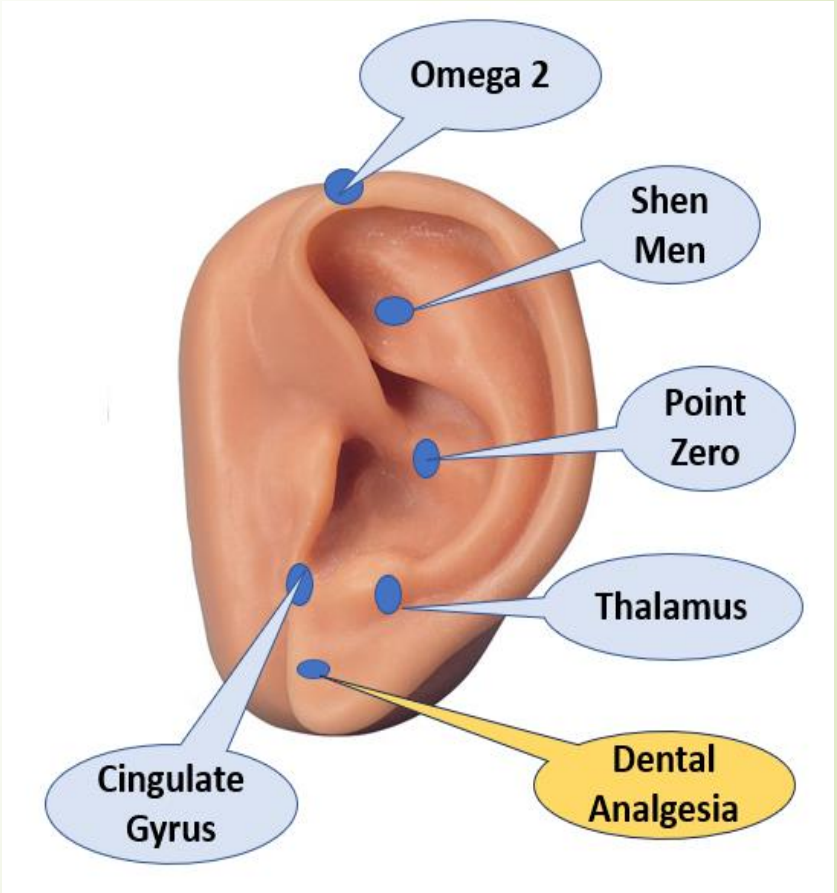


Dental Pain

Acute

History and Treatment

- 70 yr old male with 2 day history of severe dental pain, after a tooth extraction and now with dry socket. Could not eat, barely talk or drink water and could not brush his teeth.
- Placed BFA protocol plus dental analgesia point in one ear. Within 5 minutes his pain was totally resolved. He could even brush his teeth.



Back Pain

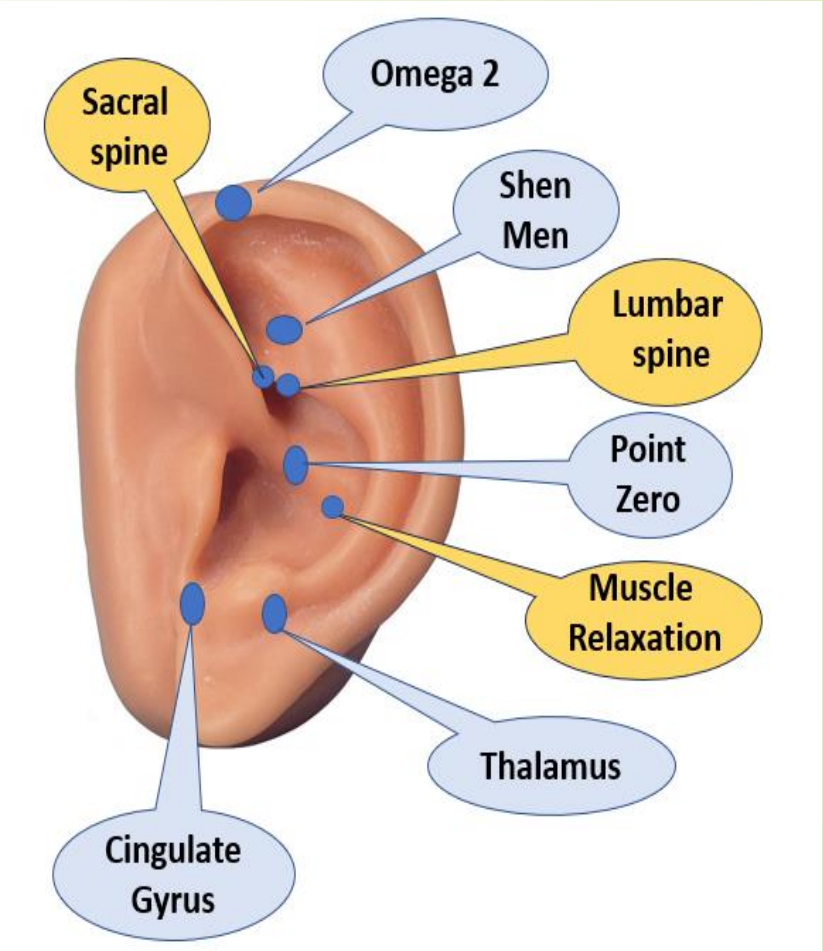
Acute

Occupational Injury – Back Strain History

- 44 year old male helping to transport a 300lb. anesthetized pig back to pen when pig suddenly awoke and in the struggle that ensued the employee injured his back.
- Presents in acute pain, unable to find a position of comfort, unable to stand or sit, lying on side without relief.
- Healthy, alert male: No meds, NKA, PMH: NC
- Pain: 10/10 P: 96 BP: 156/84
- NP and PT unable to exam employee in current state of pain – restless in fetal position

Back Strain - Treatment

- Needled points BFA plus muscle relaxation, sacral and lumbar spine in only one ear – encouraged to deep breathe – cold pack to back
- >5 minutes, pulled himself to the side of the bed, stood up still bending slightly forward and said (smiling) ‘you’re a witch’! His pain reduced to 5/10 with increased mobility, ability to withstand further evaluation P: 76 BP: 132/74
- Treated with NSAIDs and PT with Auriculotherapy for added pain management. On light duty returned to full duty in 2 weeks.



Words of Wisdom

" Anyone who is trained and licensed to give injections or do sutures could learn to use a few simple acupuncture protocols in a matter of weeks and could relieve an enormous amount of suffering."

‘Acupuncture is like noodles’: community- based acupuncture concept”

(Rohleder, et al., 2009)

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